UNITED
NATIONS

S

Security Council

Distr.
GENERAL

S/24593
28 September 1992

ORIGINAL: ENGLISH

NOTE BY THE SECRETARY-GENERAL

The Secretary-General has the honour to transmit to the members of the Security Council the attached communication which he has received from the Director General of the International Atomic Energy Agency (IAEA).

92-46659 3506j (E) 300992 011092

/...

Annex

Letter dated 24 September 1992 from the Director General of the International Atomic Energy Agency addressed to the Secretary-General

Please find attached the report of the fourteenth IAEA Inspection in Iraq under Security Council resolution 687 (1991). You may deem it appropriate to transmit the report to the members of the Security Council. I remain, of course, available with the Chief Inspector, Mr. Maurizio Zifferero, for any consultations you or the Council may wish to have.

(Signed) Hans BLIX

REPORT ON THE FOURTEENTH IAEA ON-SITE INSPECTION IN IRAQ
UNDER SECURITY COUNCIL RESOLUTION 687 (1991)

31 August - 7 September 1992

SALIENT POINTS

- The completion of the destruction by the Iraqi side of selected buildings at the two EMIS (Electro Magnetic Isotope Separation) sites at Tarmiya and Ash Sharqat was verified by the inspection team. The two sites will in future be inspected under the long-term monitoring plan.

- In the context of the long-term monitoring plan, a project has started aiming at the periodical control of radionuclides and other selected, stable nuclides of the main water bodies in Iraq. An adequate number of sites has been established covering the whole territory of Iraq, where water and sediment samples will be periodically collected. Very sensitive analytical techniques will enable information on any sizable nuclear activity carried out in the area to be obtained. The first collection of water and sediment samples, which started in the course of IAEA-14 and will be completed during IAEA-15, will provide the baseline against which future sampling results will be compared.

- The identification and tagging of a number of high-temperature laboratory furnaces and other non-released equipment kept at the Ash Shaykilii warehouse was completed. These items had been removed from Tuwaitha prior to the beginning of inspections under UNSC resolution 687 (1991), and at the request of the Agency had been collected and stored at the Ash Shaykilii warehouse.

- Several sites already inspected in previous IAEA missions have been revisited for monitoring purposes. These visits have included Al Atheer, Hatteen, Al Qa Qaa, Rashdiya, Bilat Ash Shuhada, Al Mansour and the Al Hamath "date palm tree factory". One of the two buildings at Al Hamath has been selected by the IAEC for eventual storage of the irradiated fuel elements now placed in location B in temporary makeshift containers.

- All follow-up activities from previous inspections assigned to the team as e.g. the transfer of maraging steel to a foundry in Basra for future destruction by melting, the monitoring of uranium containing wastes at Al Jezira and of the water level in the spent fuel containers stored in location B were executed.

- The team inspected an underground facility near Ash Sharqat. The facility proved to be an underground oil refinery now undergoing extensive repair and maintenance works.

- Several meetings were held with Iraqi authorities on the radiometric hydrologic survey as a component of the long-term monitoring plan, on the completeness of the "full, final and complete" Iraqi report and on Annex 3 of the long-term monitoring plan.

- The Iraqi authorities extended full co-operation to the Agency team in fulfilling the objectives of the mission.

INTRODUCTION

1. This report summarizes the activities of the fourteenth inspection mission carried out by the IAEA under United Nations Security Resolution 687 (1991), with the assistance and cooperation of the Special Commission of the United Nations. The mission took place from 31 August to 7 September 1992 and was headed by Professor Maurizio Zifferero of the IAEA as Chief Inspector. The team consisted of 15 inspectors of 10 nationalities.

The objectives of the mission were:

- to verify the completion of destruction of key technical installations at the Tarmiya and Ash Sharqat sites;

- to begin a comprehensive radiometric hydrologic survey of the surface waters of Iraq to look for possible signs of prohibited activities;

- to carry out monitoring inspections at a number of sites previously visited;

- to conduct follow-up activities such as taking confirmatory samples of nuclear materials, item counting of nuclear fuel in IRT-5000 elements, replacing water in spent fuel storage tanks; and

- collecting detailed technical data on equipment under Agency control.

2. The Iraqi side indicated during this visit that they wanted to work in a co-operative and professional way. There had also been many security incidents involving UNSCOM personnel in the previous weeks following the Ministry of Agriculture episode. The Iraqi counterparts knew of these problems and pledged support and increased protection. The team did not face civil demonstrations either in Baghdad or during field trips. The Iraqi side took note of earlier problems with timing of meetings and transportation. The meetings on technical subjects started on time without repeated cancellations. Transportation was provided as scheduled and was sometimes arranged at short notice. The counterparts were flexible and helpful in this sort of planning.

Table 1

List of facilities and sites inspected during the fourteenth inspection mission

1. Tuwaitha
   - 1a. Al Hamath
   - 1b. Location B
   - 1c. Location C
2. Ash Shaykilii
3. Al Qa Qaa
4. Tarmiya
5. Ash Sharqat
6. K-2 Facility
7. Al Mansour
8. Rashdiya
9. Al Jezira
10. Bilat ash Shuhada
11. In addition, water and sediment samples were taken at 15 sites indicated in Figure 1.

DESTRUCTION OF KEY TECHNICAL INSTALLATIONS AND EQUIPMENT

3. A list of actions to be undertaken pursuant to Security Council resolution 687 (1991) with respect to the facilities at the site of Tarmiya and Ash Sharqat had been communicated to the Iraqi authorities on 15 May 1992. Relevant activities began during the twelfth IAEA inspection mission and continued during the course of the thirteenth mission. At the end of the fourteenth mission all destruction of EMIS facilities at Ash Sharqat has been completed. Transformer and process buildings have all been destroyed in accordance with Agency instructions. The main electrical supply to the EMIS process was destroyed during the war. A water treatment plant some 9 km north of the main plant has been inspected. This plant was built to supply Ash Sharqat with water nearly ten years ago when a nuclear reactor was being planned there. Today it only supplies the water needs of the now destroyed EMIS site.

4. Destruction of the EMIS facility at the Tarmiya site was also completed. All transformer sheds for the main EMIS process building were destroyed. The destruction of all HEPAs (High Efficiency Particulate Air filters) and exhaust air filtration units was completed. The EMIS buildings have been destroyed, either by the war or by the Iraqi side under Agency supervision. The delivered power to the site has now been reduced by a factor of three. Further reductions in delivered power will depend on an evaluation of the Iraqi proposals for an alternative use of the Tarmiya site. The EMIS capability at Tarmiya can now be considered to be completely destroyed. As was the case in previous missions, the Iraqi side provided all equipment, material and manpower to efficiently implement the destruction plan under the supervision of the Agency teams.

ACTIVITIES RELATED TO LONG-TERM MONITORING

5. Discussions with the Iraqi side were held on the new Annex 3 of document S/22872/Rev.1/Corr.1, that lists and describes materials and equipment that are either prohibited to Iraq or that must be declared and monitored. The contents of this list have been approved by the Security Council and are non-negotiable. The Iraqi side asked clarification on some items, the definitions of which were, in their opinion, not sufficiently detailed. Clarifications were provided by the team. It was, however, agreed that another round of talks was needed to finally dispose of this issue.

6. Al Atheer was visited as part of the long-term monitoring program. Most of the large industrial processing buildings here were destroyed by the Iraqis under the supervision of the eleventh and twelfth IAEA inspection teams. The remaining buildings consist of offices, warehouses, and characterization and quality control laboratories. The site has been handed over to the joint use of the Ministry of Industry and Minerals, and the Military Industrial Corporation. The extant buildings are being used for non-nuclear industrial activities, including light machine shops, material characterization, and reverse engineering for spare parts production.

7. The Al Qa Qaa site has been visited many times by IAEA teams investigating links to the nuclear program. In preparation of the long-term monitoring plan at Al Qa Qaa, the team visited machine shops, testing areas, and high-explosives synthesis facilities. No nuclear-related activities were observed. The Iraqi capability to produce RDX was destroyed in the war. The relevant building has been rebuilt but the equipment has not been replaced because of the embargo. Only ordinary machine tools were found in the machine shops. Activities in the high explosive test area were found to be ordinary munitions tests.

8. South of Ash Sharqat is a heavily defended facility built into the side of a hill. It has thick concrete bunker buildings covered with several meters of earth. It had previously been visited by UNSCOM but there have been information linking it to nuclear activities. The fourteenth IAEA team also visited this site and confirmed that the facility is an underground petroleum facility (oil refinery) as declared with no nuclear function.

9. The Al Mansour Electronics Plant was visited by the fourth IAEA inspection team and was inspected as part of the long-term monitoring plan on this visit. The IAEA had information obtained after the fourth visit that Al Mansour produced some electronic components as part of the weaponization feasibility study. The Iraqis denied this and described some similar, but non-nuclear, electronics activities. The team toured the plant to establish a better baseline of its activities. No nuclear-related work was observed.

10. The team visited the Engineering Design Centre at Rashdiya as part of the long-term monitoring program. No centrifuge or nuclear-related activities were observed.

ACTIVITIES RELATED TO THE RADIOMETRIC HYDROLOGIC SURVEY

11. The purpose of this survey is to establish a radionuclide and stable isotope composition baseline in the major watershed regions of Iraq in order to detect changes resulting from aqueous effluents of nuclear related facilities. This survey will provide information in several areas: first, the data will measure the impact of present nuclear related facilities in Iraq on surface water systems receiving their aqueous effluents: second, possible unknown nuclear facilities may be detected; third, a set of data will be provided, from which changes in composition can be easily detectable for interpretation.

12. The sampling network is based upon a detailed hydrologic survey compiling the water discharges in the Tigris and Euphrates basins for selected gaging stations in Iraq. Sampling points were selected along the Tigris and Euphrates rivers and their major tributaries. Also, the New River (Canal) and selected lake basins are additional sampling points. A total of 43 sampling sites were selected. During this mission fifteen sites (fig. 1) were visited and samples were taken. The remaining sites will be sampled during the next IAEA inspection.

13. Three types of samples were collected, a filtering column used to concentrate for dissolved and particulate matter from a large volume of water (~300 l), a sediment core and a 100 ml water sample. A comprehensive sample analysis of the water filters and sediment cores will include high sensitivity gamma spectrometry, radiochemical separations of the actinides (primarily U, Pu) followed by alpha spectrometry, high sensitivity multistage surface ionization mass spectrometry (SIMS), ultralow background gas proportional counting for tritium and Inductively Coupled Plasma Mass Spectrometry (ICP/MS) for stable isotopes. Physical measurements including water and air temperature, barometric pressure, water conductivity, surface water elevations, and accurate locations description were also made.

14. The samples analysis data will be coupled with the physical measurements to establish a baseline of the present hydrologic and radiometric conditions from which present and future indications of sizable nuclear activity in Iraq can be determined.

Figure 1

The black triangles give the approximate locations of the sampling sites.

/...

ACTIVITIES RELATED TO MATERIALS AND EQUIPMENT

15. In response to requirements of Annex 3 of the long-term monitoring plant, the Iraqi side has declared 16 high temperature furnaces. Two are visible in the debris of building 73A at Tuwaitha where they are badly damaged. Two more are declared as having been at Al Jezirah and are lost or destroyed. One is in working condition at building 12 at Tuwaitha. The others were all located in the warehouse at Ash Shaykilli and they were examined and catalogued. All except one fall outside the specifications listed in Annex 3. This is the induction furnace used for experiments in uranium metal casting.

16. The level of water in the spent fuel container stored in location B had decreased as a consequence of evaporation. The team supervised Iraqi activities to restore the required water level. New seals were applied to each container. The IAEA team reviewed a proposed change in the storage containers that will allow addition of water without disturbing seals. This will aid in reducing radiation exposure significantly and permit further addition of water without Agency presence. One of the two buildings at the Al Hamath site near Tuwaitha has been selected by the IAEC for storage of the irradiated fuel elements now placed in location B in temporary makeshift containers. Experience of the past seventeen months has shown that this situation entails excessive radiological risks and if removal of this fuel is delayed beyond the coming winter, a more suitable albeit temporary solution has to be found. The building at Al Hamath could be a reasonable choice.

17. The IAEA has placed approximately 250 tonnes of HMX high explosive under seal at Al Qa Qaa. The Iraqi authorities have requested that this material be released to them for civil blasting applications. The IAEA team checked the seals of the explosive storage buildings and found them to be in order.

18. Part of the IAEA team travelled to the Al Jezira site to check the volume reduction of uranium containing wastes in the evaporation tanks. Summer heat has evaporated the waste to dryness and plans are in progress to place the solid waste in drums and remove them to location C at Tuwaitha.

19. The maraging steel ingots have been removed from Iskandariya at the request of the Agency and are now ready for melting with an equal amount of high carbon steel at a foundry in the Basra area. This operation will be performed under the supervision of the next IAEA inspection mission.

20. Despite repeated questioning, the Iraqi side remained unwilling to disclose important procurement-related information and the foreign sources of technical advice. Once again the team renewed its request for documents which were not returned to the sixth inspection mission.

Annex 1

List of documents received or sent

14-01 Mr. Zifferero to Mr. Al Hajjaj on 920827 regarding the release of additional items relating to the 92-truck convoy.

14-02 Mr. Zifferero to Mr. Al Hajjaj on 920831 requesting written confirmation of a previous oral statement made by the Iraqi authorities that no quantities of uranium was ever introduced in buildings 14 and/or 85 of the Al Atheer site.

14-03 Mr. Al Hajjaj to Mr. Zifferero on 920906 confirming that no quantities of uranium have ever been introduced in buildings 14 and/or 85 of the Al Atheer site.

14-04 Mr. Dorn (Specom) to Mr. Zifferero and from Mr. Zifferero to Mr. Al Hajjaj on 920831 requesting clarifications on use of integrated hydrodynamic-neutronic codes.

14-05 Mr. Al Hajjaj to Mr. Zifferero on 920906 giving answers to the queries contained in 14-04.

14-06 Mr. Zifferero to Mr. Al Hajjaj on 920902 concerning the removal from Iraq of samples of depleted uranium, pellets of 10% enriched uranium oxide and of a pin containing 2.26% enriched uranium oxide.

14-07 Mr. Al Hajjaj to Mr. Zifferero on 920905 stating that the material listed in 14-06 had been removed by the IAEA-14 team.

14-08 Mr. Al Hajjaj to Mr. Zifferero on 920906 providing an explanation on the intended use of some equipment contained in the list of the 92-truck convoy for which the Iraqi side had requested release.